

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A pillar-shaped honeycomb structural body mainly made of comprising:

a porous ceramics, ceramic body in which a plurality of through holes are placed formed in parallel with one another in [[the]] a length direction of the porous body and [[with]] a partition wall portion is interposed therebetween between the through holes, the porous body having an inlet side and an outlet side,

wherein said plurality of through holes comprises: includes a group of inlet-side through holes sealed by plugs at the outlet side and a group of outlet-side through holes sealed by plugs at the inlet side, whose ends the inlet-side through holes have are sealed by plugs at the outlet side such that the total sum of cross section areas on cross sections perpendicular to the length direction which is made relatively greater, and a group of the outlet-side through holes, whose ends are sealed by plugs at the inlet side such that have the total sum of cross section areas perpendicular to the length direction on the cross sections thereof which is made relatively smaller, supposing that the aperture rate on the inlet side is X (%) and that the total sum of thermal capacities of the plugs which seal the group of inlet-side through holes at 500°C per 11.8 cm² of the end face on the outlet side containing the group of the outlet side through holes is represented by Y(J/K), the relationship indicated by the following inequalities (1) and (2) being satisfied. and the inlet-side through holes and the plugs sealing the inlet-side through hole at the outlet side satisfy inequalities,

$$0.0157X - 0.0678 < Y < 1.15X - 5 \dots (1) \text{ and}$$

$$35 \leq X \leq 60, \dots (2)$$

where X represents an aperture rate on the inlet side in %, and Y represents the total sum of thermal capacities in J/K of the plugs sealing the inlet-side through holes at 500°C per 11.8 cm² of an end face of the ceramic body on the outlet side including the outlet-side through holes.

Claim 2 (currently amended): The honeycomb structural body according to claim 1, wherein ~~supposing that the total sum of thermal capacities of the plugs which seal the group of sealing the inlet-side through holes at 25°C per 11.8 cm² of the end face on the outlet side containing the group of the outlet-side through holes is represented by Z(J/K), a relationship indicated by the following inequality (3) is satisfied. satisfy an equality,~~

$$0.013X - 0.09 < Z < 0.7X - 2.5, \dots (3)$$

where Z represents the total sum of thermal capacities in J/K of the plugs sealing the inlet-side through holes at 25°C per 11.8 cm² of the end face of the ceramic body on the outlet side including the outlet-side through holes.

Claim 3 (currently amended): The honeycomb structural body according to claim 1 or 2, wherein ~~the Y satisfies a relationship, indicated by the following inequality (4) is further satisfied.~~ $0.05X - 0.55 < Y < 0.574X - 2, \dots (4)$

Claim 4 (currently amended): The honeycomb structural body according to claim 3, wherein ~~the Z satisfies a relationship, indicated by the following inequality (5) is further satisfied.~~ $0.05X - 0.55 < Z < 0.354X - 1, \dots (5)$

Claim 5 (currently amended): The honeycomb structural body according to ~~any one of claims 1 to 4~~ claim 1, wherein said porous ceramic body is porous silicon carbide.

Claim 6 (currently amended): A honeycomb structural body, wherein a sealing material layer is formed on a circumferential face of a honeycomb block that is formed by

combining a plurality of honeycomb structural bodies according to ~~any one of claims 1 to 5~~
according to claim 1 through a sealing material layer with one another.

Claim 7 (new): The honeycomb structural body according to claim 2, wherein said porous ceramic body is porous silicon carbide.

Claim 8 (new): The honeycomb structural body according to claim 3, wherein said porous ceramic body is porous silicon carbide.

Claim 9 (new): The honeycomb structural body according to claim 4, wherein said porous ceramic body is porous silicon carbide.

Claim 10 (new): A honeycomb structural body, wherein a sealing material layer is formed on a circumferential face of a honeycomb block that is formed by combining a plurality of honeycomb structural bodies according to claim 2 through a sealing material layer with one another.

Claim 11 (new): A honeycomb structural body, wherein a sealing material layer is formed on a circumferential face of a honeycomb block that is formed by combining a plurality of honeycomb structural bodies according to claim 3 through a sealing material layer with one another.

Claim 12 (new): A honeycomb structural body, wherein a sealing material layer is formed on a circumferential face of a honeycomb block that is formed by combining a plurality of honeycomb structural bodies according to claim 4 through a sealing material layer with one another.

Claim 13 (new): A honeycomb structural body, wherein a sealing material layer is formed on a circumferential face of a honeycomb block that is formed by combining a plurality of honeycomb structural bodies according to claim 5 through a sealing material layer with one another.